DIRECTOR'S COPY

Andover Summer Session

PHILLIPS ACADEMY

ANDOVER, MASSACHUSETTS

June 27 — August 9

1962

Calendar for the Summer, 1962

Tuesday, June 26th
Scholarship boys report by 1:30 p. m.

Wednesday, June 27th
Registration — 9:30-12:30; 1:30-4:00.
Tea for Parents, Andover Inn — 4:00-5:00 p. m.

Thursday, June 28th
Classes begin.

Saturday, June 30th
Closed week-end, no permissions granted.

Wednesday, July 18th
Mid-session rating.

Saturday, August 4th
Closed week-end, no permissions granted.

Wednesday, August 8th
Classes end.

Thursday, August 9th
Final examinations, 8:30-10:00 a. m.
Summer Session closes, 12:00 noon

Summer Session Telephone: GReenleaf 5-3400.

Summer Session Office Hours: Weekdays: 8:00 a. m.- 12:30 p. m.; 1:30-4:30 p. m. Saturdays: 8:00 a. m.- 12:00 noon.

For further information regarding the Summer Session, write:

MR. ROBERT P. HULBURD
Director, Andover Summer Session
Phillips Academy
Andover, Massachusetts

Phillips Academy

Phillips Academy in Andover, Massachusetts, is a college-preparatory, boarding school for boys. Now in its 183rd year, the Academy has an enrollment of over eight hundred students and a faculty of over ninety. In the session, 1960-1961, its students came from forty-six states, the District of Columbia, and twenty foreign countries.

Phillips Academy is a liberal, modern school with a long tradition of national service and devotion to democratic ideals. It seeks to develop in its students sound scholarship and manly character, with emphasis on resourcefulness, self-reliance, and independence.

Throughout the four years of its curriculum, Andover stresses thorough training in English, foreign languages, history, mathematics, and science. There are also other liberal arts courses. Large scholarship funds put the education which it offers within reach of any serious and able student in need of aid.

The town of Andover is twenty-five miles north of Boston, from which it is easily reached by train, bus, or automobile.

The Andover Summer Session

Dating from 1942, the Andover Summer Session is an integral part of Phillips Academy. Administered by a director chosen from the Academy faculty, it comprises a

teaching staff of over thirty men, chiefly instructors in the regular session, and a student body numbering over two hundred. Ranging in age from thirteen to eighteen and in 1961 coming from thirty-three states, the District of Columbia, and four foreign countries, the boys come from widely diverse backgrounds. Some of them, already admitted to the regular session, are strengthening their preparation; many more have come to Andover to combine the experience of boarding-school life with the opportunity for serious study and academic achievement.

The curriculum is broad, and the educational standards are high. Outside the classroom there is a full boarding-school program of sports both formal and informal, and extracurricular activities. Frequent supervised excursions are offered on Saturdays and Sundays to students at their expense. These include trips to summer theatres, concerts, nearby beaches, major league baseball games and historical sites.

THE SUMMER SESSION CURRICULUM

The purpose of the Andover Summer Session is to provide an opportunity for serious study to qualified and able secondary-school students. Up to the limit of its capacity the Summer Session welcomes qualified boys from high schools and preparatory schools. *Is must be understood, however, that it is not a tutoring or cramming school, nor yet a summer camp.*

Hence, although there is opportunity for review and strengthening in basic subjects, it is expected that boys who attend for the summer only will take new and advanced work rather than review courses designed to repair previous failures.

A brief description of the courses offered in the Summer Session is given on pages 16-26 of this catalogue. *No course will be given unless it has a sufficient enrollment.* Applicants for admission are expected to make known the course which they wish to take.

Major Courses

Major courses meet two periods a day. six days a week. Th Summer Session offers advanced courses in History, Chemistry, and Physics; courses at elementary, intermediate, and advanced levels in English, Mathematics, Modern Languages, and Classics; courses in Music and in Art.

Inasmuch as a six-weeks Summer Session cannot be the equivalent of a similar full course taken during the regular academic year at Phillips Academy, no Phillips Academy credit will be given. Students may, however, make arrangements with authorities at their own schools for the establishment of credit.

Composition

Every student attending the Summer Session is required to take a course in composition appropriate to his level. Exceptions are those students who take the Art of Communication. and those enrolled in Pre-Ninth Grade English. There are three courses in Composition: one designed for eleventh and twelfth grade students, one designed for ninth and tenth grade students, and a foundation course for those in need of a review of the fundamentals of grammar. Preliminary assignment of these courses is made on the basis of grade completed; further screening is made on the basis of tests administered during the opening days.

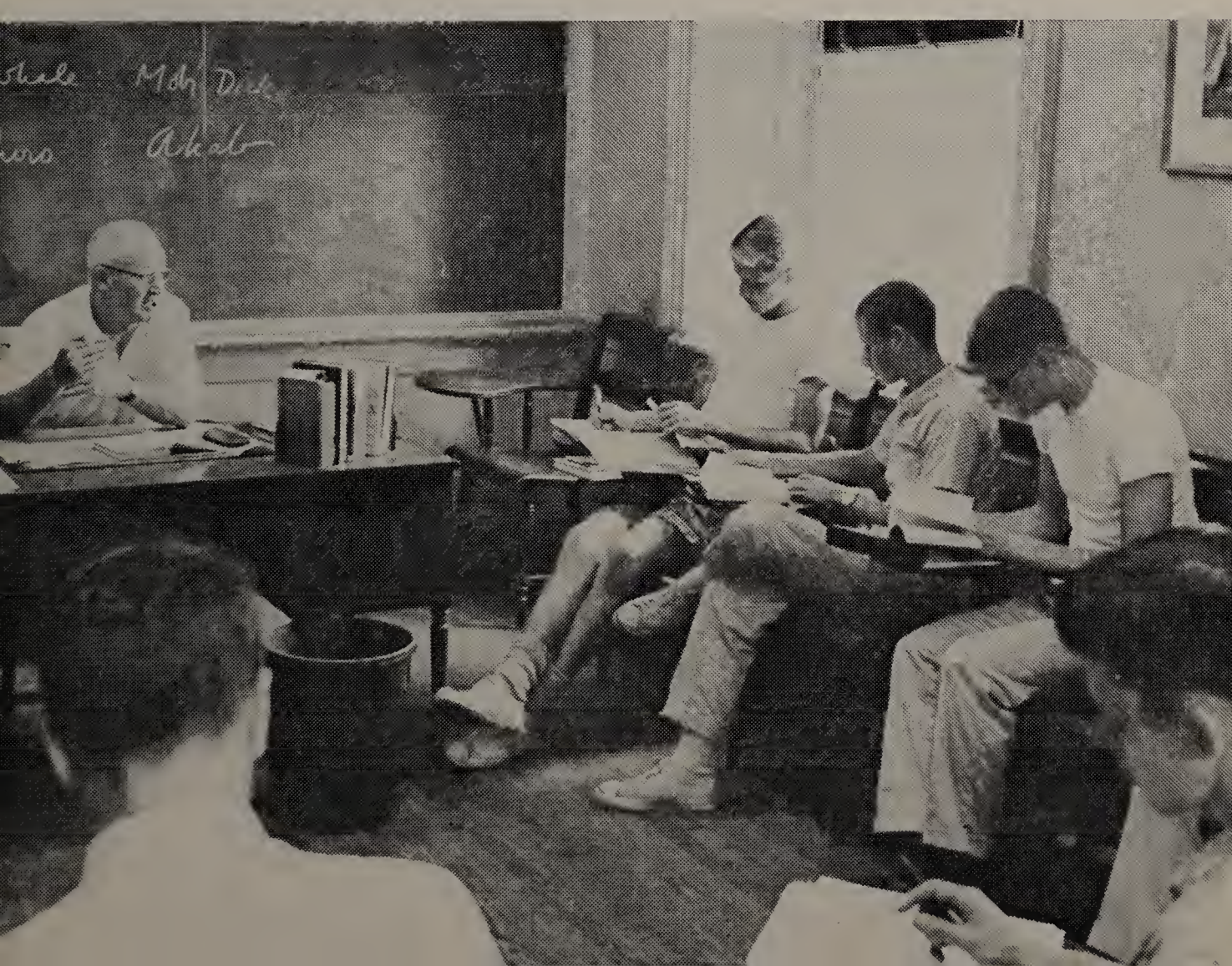
These courses are described in detail under *Courses*,

p. 16-26. Each meets six hours a week and requires the writing of frequent themes.

ADVANCED COURSES FOR OLDER BOYS

A large number of advanced courses will be offered. A complete description of all courses begins on page 16. The following are but a few of the courses given which do not ordinarily fall within the framework of a secondary-school curriculum: "The Art of Communication;" "Developmental Reading;" "International Politics;" "Probability with Applications to Elementary Statistics;" and other advanced topics in mathematics and the sciences.

In some instances these courses are offered only to boys who have completed the eleventh or twelfth grades; in other cases a prerequisite for enrollment in a course calls for previous study in that particular area.



General Information

INDIVIDUAL RESPONSIBILITY AND DISCIPLINE

Attendance at the Andover Summer Session implies a serious purpose on the part of the student and a willingness to assume a large measure of responsibility for maintaining order and for cooperating directly in the running of the Session. Rules are few and simple, and are based on the assumption that the student is able to discipline himself.

Dormitories have faculty supervision. The students themselves perform some of the everyday tasks connected with the operation of the school. They make their own beds, keep their rooms in order, serve themselves at meals, and take their turns at the regular work of the dining hall. *Every student is required to meet all his appointments.*

With the exception of the first and last weekends of the Session, a student in good standing may go to his home or visit a friend's home on any three of the remaining weekends, leaving after his last appointment on Saturday and returning in time for evening study hours on Sunday. Similar privileges are allowed for Saturday and Sunday day trips to nearby places. Before a student is permitted to visit a friend for the weekend, he must present to the Assistant Director a written invitation from his host and and written permission from his parents. All out-of-town excuses may be withheld if a student's record or effort is unsatisfactory or if, in the judgment of the faculty, his work would suffer through his absence.

Any student who shows himself unwilling to conform to the spirit of the Session, who neglects his work, or who is

believed to exercise an injurious influence upon others may be dismissed at any time.

The possession, the renting, or driving of any motor vehicle in the town of Andover is forbidden.

FACILITIES

The buildings, equipment, and facilities of the Academy are available for the Summer Session. Classes are held in the regular classroom buildings and students eat in the Commons and live in the dormitories. The Oliver Wendell Holmes Library, containing seventy-five thousand volumes, the Addison Gallery of American Art, and the museum of the Peabody Foundation for Archaeology are open throughout the summer.

THE DAILY SCHEDULE

7:10-7:25	Breakfast
7:55-8:10	Assembly
8:15-9:10	First period
9:20-10:15	Second period
10:25-11:20	Third period
11:30-12:25	Fourth period
12:30	Lunch
1:15-2:10	Conference period
2:45-4:15	Athletics
6:00	Dinner
8:00	Evening study hours
9:45	Lights out for younger boys
10:30	Lights out for the rest of the school
11:00	Lights out for all on Saturday night

On Wednesday and Saturday afternoons there will be no required athletics.

On Saturday, assembly is omitted, and classes begin at 8:00 a. m. and end at 12:00 noon.

FACULTY

The faculty is drawn from the regular Academy teaching staff and supplemented by a few men from other leading secondary schools. The Trustees and Headmaster of Phillips Academy have full authority over the Summer Session. Immediate control is in the hands of the Director.

PHYSICAL FITNESS AND SPORTS

The Summer Session has a comprehensive health and athletic program. Unless excused by the school physician, each student takes part in the athletic program four days a week.

Organized programs in tennis, track, swimming and baseball are offered. The numerous Academy playing fields and tennis courts provide excellent facilities. The six-lane swimming pool with separate diving pool is used for the regular swimming program. Also available for

general use are the pool, volley ball and basketball courts, and other facilities in the gymnasium.

On Fridays and rainy days interdormitory competitions are held. On rainy days the competitions include water polo, volley ball, basketball, and indoor track and field events. On Fridays the interdormitory competitions include soft ball, track events, soccer, touch football, and swimming relays. Dormitory competition over the entire summer contributes to maintaining lively interest and gives the boys a chance to know one another in competitive sports.

At the opening of the session a swimming test is given to each boy, and those who cannot swim are required to take lessons. Swimming instruction is also given to others who wish it.

HEALTH SUPERVISION AND MEDICAL CARE

In addition to directing the physical fitness program described above, the Academy Department of Health supervises the Summer Session diet, the health of food handlers, the condition of the swimming pool, and other aspects of community hygiene.

The Isham Infirmary-Hospital, a small, well-equipped hospital of 55 beds, is approved by the Joint Commission on Accreditation of Hospitals, and is open throughout the Summer Session with a physician and trained nurses in residence. When necessary, hospitals and specialists of the cities of Boston and Lawrence can be reached very quickly.

There is no charge for care at the Isham Infirmary-Hospital in the event of injuries or illnesses which might be termed "home care." However, parents are responsible for the payment of medical and hospital services at Isham Infirmary-Hospital for the care of illnesses and conditions for which they, the parents, would have been responsible

Match courts with Cage, Gymnasium, and hockey rink in background

had the student been treated by his family physician in the student's home or hospital. The family sickness and accident insurance policy or a personal policy of the Blue Cross-Blue Shield type covering the student will meet most of such Isham Infirmary-Hospital care.

In order to assist parents in budgeting expense for extra medical care, the health and insurance plan is provided for all Summer Session students at $9.00 per student. This is a required fee. The plan covers the cost of doctors' bills and hospital care *outside* of Isham Infirmary-Hospital up to $500.00 for any one sickness or accident except in the event of accidental injury to sound, natural live teeth, when the limit of reimbursement is $100.00

Boys accepted in the Summer Session are required to submit medical forms furnished by the Session and completed by their family physician before June 23, 1962.

RELIGIOUS SERVICES

On weekdays there is a brief morning assembly conducted by various members of the faculty. On Sundays students are required to attend one of the several church services in the town of Andover.

MUSIC

This summer will be marked by an attempt to develop an active extracurricular music program featuring both vocal and instrumental music. This program will include trios, quartets and ensembles of various instrumentations, and if the musical enrollment is sufficient and balanced will include band, orchestra and chorus. Since the informal atmosphere of the Summer Session is conducive to the enjoyment of these pursuits, boys are urged to bring their musical instruments with them. Arrangements can also be made for private instruction in piano, orchestral and band instruments, at an extra but nominal fee.

EXPENSES

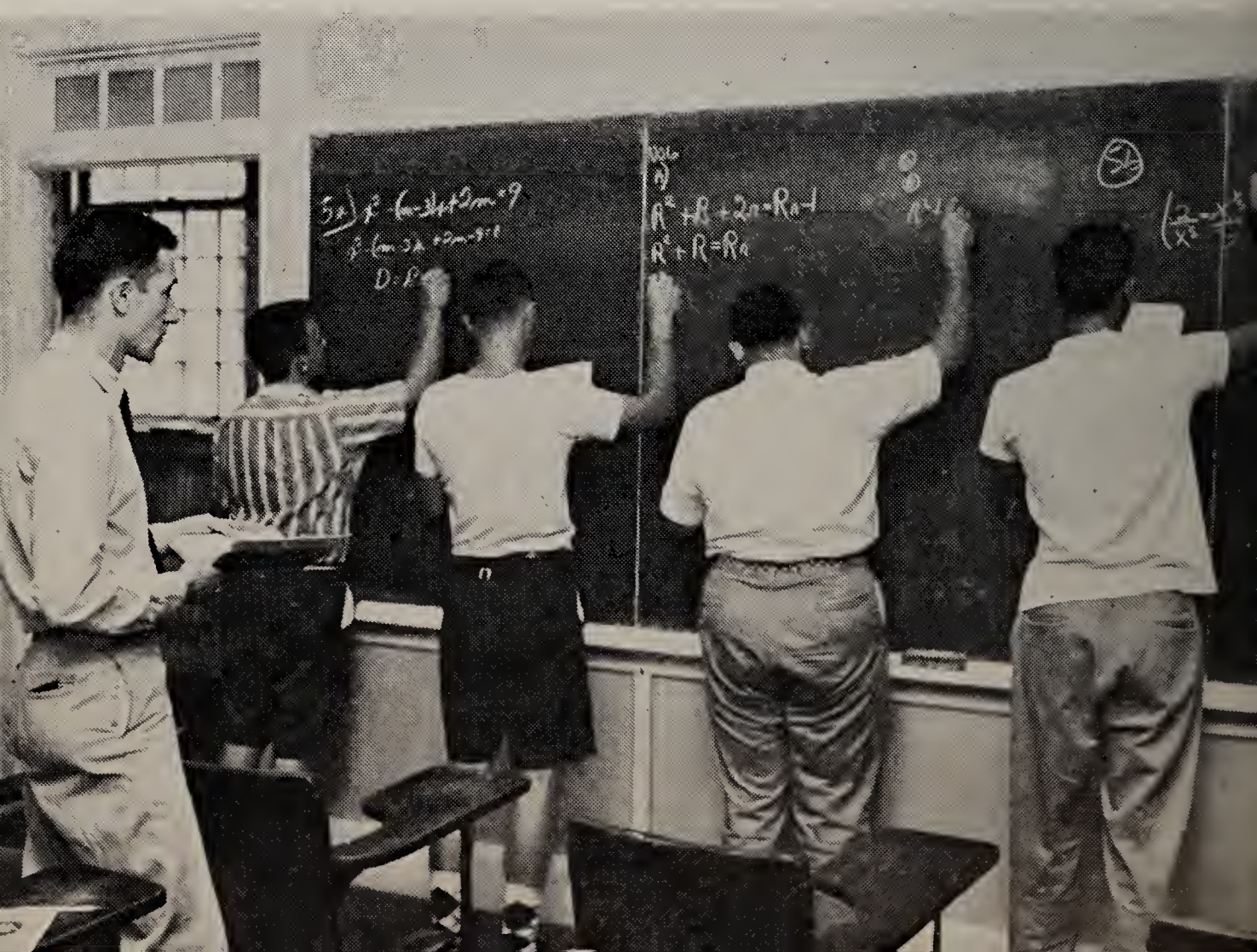
The charge for a boarding student at the Summer Session is $600, which covers board, room, and tuition. Each student is required to make a deposit of $25 when his application is accepted. The balance of the charge — $575 — is due by July 14. The charge for day students is $350, which covers tuition and meals in the Commons. Day students are required to make a deposit of $25 when admitted and to pay the balance by July 2.

All checks should be made payable to the Trustees of Phillips Academy. Preliminary deposits should be mailed to the Director of the Summer Session. Tuition payments should be mailed, upon receipt of bills, direct to the Comptroller of Phillips Academy. No rebate for the half

session in which he leaves will be made to a student who, for any reason, is dismissed or withdrawn.

Dormitory rooms are equipped with furniture, bed linen, and a blanket. Students must furnish their own desk lamps. In addition to clothes, towels, and personal effects, each student should bring such individual athletic equipment as he may wish. He should also bring a suit of solid color and white shirts to be worn to church on Sunday.

Expenses beyond the $600 charge should be light. They will include expenditures for personal laundry, books. incidentals, and spending money. Some of the books needed can be rented from the Loan Library in George Washington Hall. All students are expected to live simply, and expenditures beyond the Summer Session charges and transportation need not exceed $30-$40. Students are encouraged to set up drawing accounts in the Treasurer's Office.



ADMISSIONS AND SCHOLARSHIPS

Because of the purpose and nature of the Summer Session, entrance examinations are not required of regular Summer Session students. All students, however, must present acceptable evidence of serious purpose, good character, and ability to meet the scholastic standards of Phillips Academy. In keeping with the Academy's position as a national school, the geographic location of applicants is also taken into consideration by the Admissions Committee. Whenever possible, a personal interview should be arranged. Since the capacity of the Summer Session is definitely limited, early application is highly desirable.

An applicant for admission should obtain from the Summer Session Office the official application form. A fee of $5, payable to the Trustees of Phillips Academy, is required of each candidate. After completion of the first part by the parent or guardian, the application should be submitted to the Principal or Guidance Counselor of the school presently attended by the applicant, with the request that it be completed entirely and returned at once to the Director of the Summer Session.

Ten full scholarships of $600 each and a number of additional partial scholarships will be awarded to boys of unusual promise not previously enrolled in Phillips Academy whose chief purpose in coming to the Summer Session is to advance their education and increase their capacity to assume greater responsibilities. Scholarship boys will be expected to take some small job necessary to the smooth functioning of the Session, but such work will not interfere with full participation in the life of the school.

Awards will be based mainly on three factors: intellectual ability, character, and financial need. Also considered is achievement in some worth-while activity out-

Samuel Phillips Hall — Main Class Room Building

side the classroom; i.e., responsible participation in community affairs, student government, or other extra-curricular activity, or developed special interests of an intellectual or artistic nature.

Scholarship applications should be made on special blanks which will be furnished on request. These, together with the materials which they call for, must be returned to the Director by April 16. Awards will be announced shortly thereafter. Although funds for scholarship aid are limited, it is hoped that no outstanding student of serious purpose will be prevented for financial reasons from enrolling.

PRE-NINTH GRADE STUDENTS

Special provision is made for a limited number of younger boys who plan to enter the Junior class (ninth grade) in Phillips Academy or elsewhere in September and who wish to gain experience for the regular ninth grade program. All pre-ninth grade boys will be required to take pre-ninth grade English and mathematics courses of nine hours each, although in some instances exceptions will be made. These courses serve to strengthen a boy's foundation work and improve the adjustment to the ninth grade.

Courses

The normal program for each boy is eighteen hours of classroom work. In addition to his elected twelve-hour major course, each boy will take a six-hour course in English composition, except for those enrolled in the pre-ninth grade program, the course in the short story, and the Art of Communication.

ART

Developing Visual Perception — 12 Hours

Mr. Shertzer

A Major Art Course designed to introduce the interested student to the visual world of the artist. Basic drawing, two-dimensional design, color theory and its application to painting and design, and painting are the areas covered in an attempt to explore the impact of this world on contemporary society. Outside reading and exhibits of the Addison Gallery will be used as part of the course.

CLASSICS

Elementary Greek — 12 Hours

Dr. Gillingham

This course will introduce the student to basic Greek grammar, but the primary intention of the course will be to develop a reading ability of simple prose. With this introduction it is hoped that he will proceed alone in his study of the language or be ready for more advanced work under supervision. While the actual reading done will be slight, an increasing quantity of selections from Xenophon will be studied.

The prerequisite for this course is one year of another language.

Elementary Latin — 12 Hours

Mr. Krumpe

This course will center upon the first elements of Latin forms (nouns and adjectives of the first three declensions, and the Indicative, Active, and Passive of the first two conjugations) to acquaint the beginner with the nature and function of inflectional endings. The aim is to prepare the pupil for a more systematic approach toward, and deeper insight into, the study of Latin and of other par-

tially or fully inflected languages. At an early stage, simple readings will be introduced to encourage the pupil from the outset to see inflected forms as inter-related parts of a context working together for the expression of thought and meaning.

Intermediate Latin — 12 Hours

DR. BAADE

For boys who have studied elementary Latin for not more than a year. This course will offer a series of graded readings as the medium for a comprehensive review of basic fundamentals. Individual points of forms and syntax will be stressed as the need is indicated by the pupils' progress in reading. Passages to be read will be selected from a variety of sources in the light of the pupils' needs, interests and ability.

Advanced Latin — 12 Hours

MR. AMBROSE

For boys who have studied Latin two years. A variety of selections from Eutropius. Nepos, Livy and Erasmus will be read in the course, to afford such pupils as are terminating their study of the language a richer experience in Latin literature than is customarily offered in a Caesar course, and to bridge the gap between Caesar and Cicero for those who plan to take a third year of Latin. Basic fundamentals will be reviewed as the need is indicated by class performance.

ENGLISH

Elementary Composition — 6 Hours

MEMBERS OF THE DEPARTMENT

This course is designed for those pre-9th grade students who are not enrolled in Pre-9th Grade English, and for those students who desire a foundation course in mechanics, including spelling, punctuation, and the elements of the sentence. Frequent short themes are required; individual conferences are held weekly, or as need indicates.

Intermediate Composition — 6 Hours

MEMBERS OF THE DEPARTMENT

This course, designed for ninth and tenth grade students, includes 1) a thorough review of grammar, spelling and punctuation; 2) a study of the syntax of the sentence; 3) a study of elementary rhet-

oric; 4) a study of the principles of paragraph organization. Students write narrative, descriptive, and expository paragraphs, with the emphasis on exposition. Frequent themes are required, and these furnish much of the material for class study. In addition, paragraphs for close study are supplied from all sources.

The texts for this course will be *Writing for College,* by Barrett, and *Essays Old and New,* ed. Jameson.

Advanced Composition — 6 Hours

Members of the Department

This course is designed for eleventh and twelfth grade students, and includes 1) a review of the syntax of the sentence; 2) a study of rhetoric and style; 3) a review of the principles of paragraph development; 4) a study of the organization of the theme. Grammar, spelling, and punctuation are reviewed as the occasion demands and as opportunity arises. Students have an opportunity for creative writing as well as the personal essay. Further material is drawn from the class texts and from all literary sources. The texts for this course will be *The Elements of Style,* by Strunk and White, and *Studies in Reading and Related Writing* (D. C. Heath and Co.).

Developmental Reading — 12 Hours

Mr. McBee

A practical course in the techniques of reading and studying. NOT a remedial course, but one designed to improve total study efficiency through training in reading speed, library techniques, and methods of study. The work, though guided, demands wide reading, independence, and an interest in the mature use of facts and ideas. The objectives are approached through class, library work, and individual conferences.

The course is open only to boys who have completed the 10th grade, and sections will be limited to twelve students.

There is a minimum reading requirement of two books each week.

Pre-9th Grade English — 9 Hours

Messrs. Marlow and Regan

The purpose of Pre-9th Grade English is to instill in the student a sensitivity to words in both reading and writing. Class discussion frequently focuses on vocabulary from reading assignments; the student considers synonyms and shades of meaning, and learns to use the dictionary effectively. He has frequent writing assignments

in and out of class, including a daily paragraph in his journal. There is ample opportunity for individual conferences on composition. His readings in the major literary genres include such texts as *The Pocket Book of Short Stories, The Pocket Book of Verse,* Shakespeare's *A Midsummer Night's Dream,* and Hemon's *Maria Chapdelain.*

Intermediate Literature — 12 Hours

MR. COOK

This course is designed for students in grades nine and ten.

The work in literature will be distributed over fiction, the drama, poetry, and the essay with emphasis upon close reading, explication, and discussion.

Representative texts are *The Mayor of Casterbridge, Victory, Henry IV,* poems from *The Book of Living Verse,* edited by Untermeyer.

Advanced Literature — 12 Hours

MR. FREEMAN

This course is designed for eleventh and twelfth grade students. The work will be distributed over fiction, the drama, and poetry. The works studied are of greater depth than those studied in the Intermediate Course. There will be emphasis on close reading, explication, and discussion.

The three Theban plays of Sophocles, Shakespeare's *Macbeth,* and Hardy's *The Mayor of Casterbridge* will be studied in terms of changing conceptions of tragedy and the tragic hero. Compositions will grow out of the texts.

Reading and Writing Short Stories — 12 Hours

MR. BASFORD

The purpose of this course is two-fold: (1) to read, analyze, and discuss a number of short stories from Poe to Salinger, and, (2) to apply the knowledge of techniques gained from this reading to practice in the writing of original short stories. Through the close reading, analysis, and discussion in class of stories, students will be made aware of the techniques by which established writers have achieved their effects. Through the reading and close analysis in class of their own writing, students will learn how to criticize and evaluate their own work, to know how good or bad it is, and why,

The course does not aim to turn out professional writers, but it may help would-be writers to discover their talent or lack of it. The course is likely to interest students who crave the discipline and the fun of creative effort in fiction. Student writing will be read before the class and judged by the class. The first two weeks will be spent reading and discussing *15 Stories,* Edited by Barrows (D. C. Heath and Co.).

Students taking this course are not required to take any other composition course.

The Art of Communication — 12 Hours

MR. MCCARTHY

The purpose of the course is to make the student usefully aware of the many subtle ways in which words function to produce sound thinking, intelligent reading, and effective written and oral expression. To that end, the considerable amount of reading and writing demanded in the course involves much attention to such elements as problems of definition (assigning exact meanings to key terms), multiple meanings of words, the effects of context on meaning, the handling of abstractions and symbols, the difference between statements of fact and opinion, and the difference between the connotation and denotation of a word or statement.

Every attempt is made to improve the quality and extend the range of the student's thinking by training him to read both more exactly and more imaginatively in a wide variety of fields: social, political, scientific, literary, and philosophical. The materials read are subjected to close semantic analysis, in the belief that the habit of scrupulous attention to the meaning of the printed word results in the habit of clearer and more logical thinking; and that that,in turn, leads to more effective and substantial writing and speech.

Hayakawa's *Language in Thought and Action* (Revised Edition) is a basic text. Both that book and this course might appropriately be entitled *Language in Thought, Action, and Art,* for each gives approximately equal emphasis to the logical, social, and aesthetic functions of language.

This course is designed for students who will be entering college in the fall and for especially able boys who have completed eleventh grade English and wish to do further work at an advanced senior level.

Students taking this course are not required to take any other composition course.

HISTORY

The Constitution of the United States and its Meaning Today — 12 Hours

MR. ALLIS

This course will consist of a fairly intensive study of the Constitution of the United States and of important interpretations of that document by the Supreme Court. Topics to be emphasized will include desegregation, free speech, taxation, regulation of commerce, and other matters of current interest. The work of the course will consist of assigned readings, class discussion, occasional lectures, and possibly the writing of a paper on a constitutional topic.

Though designed to be of general interest, this course should be particularly profitable to students who are considering careers in either law or government.

International Politics — 12 Hours

MR. LARRABEE

The purpose of this course is to introduce the student to international politics through study and critical examination of the factors and concepts that make for political action.

Topics covered in the course will include: Geography and International Relations; Population and World Politics; The Force of Nationalism; Power Politics and the Balance of Power; Imperialism; The Nature of Foreign Policy; The Problem of National Security; The United States vs. the Soviet Union; The Search for International Security. The student will be expected to develop note-taking techniques, to improve his powers of oral and written communication, and to contribute to the discussion of ideas.

In addition to a basic text, a source book on 20th century readings in international politics, appropriate paperbacks, and selections from magazines and pamphlets will be used. The course is limited to students in the eleventh and twelfth grades and other qualified students.

MATHEMATICS

Pre-9th Grade Mathematics — 9 Hours

Messrs. Frankel and Smith

A course for boys who have finished eighth-grade arithmetic. It will attempt to improve their mastery of the basic arithmetic skills and at the same time develop their mathematical maturity by consideration of number scales; the number system; some intuitive geometry, etc.; and thus make them ready for a strong course in first-year algebra.

Topics in Elementary Algebra — 12 Hours

Mr. Drake

This course is designed for those boys who have had an introduction to algebra but have not progressed far enough to be ready for the Phillips Academy course in intermediate algebra. Attention will be paid to the structure and laws of algebra as well as to attaining mastery of the necessary manipulative skills.

Topics in Intermediate Algebra — 12 Hours

Instructor to be named

A course for boys whose work in second year algebra has been insufficient or incomplete. This is not meant for repeaters or for boys who have failed their school course but rather for those students whose schools offer only a half year of intermediate algebra or who wish to increase their power and understanding of algebraic technique.

Basic Concepts of Algebra — 12 Hours

Mr. Mikula

For boys who have had at least one full year of algebra. An attempt will be made to consider some of the basic logical ideas which lie at the foundation of algebra. Then many of the theorems upon which manipulative processes rest will be developed and proved. This course will not duplicate work done in most schools but it will help boys who have some mastery of elementary algebra to lay a firm foundation for understanding of their later work. It will also be an excellent preparation for boys going on into geometry as it will stress the logical structure which is a fundamental part of any mathematical system.

An Introduction to Analytic Geometry — 12 Hours

Mr. Banta

Open to boys who have had one year of algebra and one year of Geometry. A study of the power of uniting the methods of two different branches of mathematics on certain problems. This course will show a boy how to use geometric ideas to study algebraic problems and algebraic methods to study problems usually posed in geometric terms.

A Study of Curves and Motion — 12 Hours

Mr. Morell

A course for boys who have had only one year of algebra. This will be an elementary study of the fundamental ideas of the calculus. Usually reserved for much later, the study of these ideas is perfectly feasible at this level and should prove fascinating for boys of this age.

Elementary Functions — 12 Hours

Mr. Lux

The concept of the function is of fundamental importance for all mathematics but it is not often considered thoroughly in secondary schools. This course will undertake a careful study of the function concept in several elementary situations. Algebraic, exponential, logarithmic and trigonometric functions will be taken up, but in such a manner as not to duplicate work done in regular courses in Algebra and Trigonometry.

Open only to boys who have completed at least three years of high-school Mathematics with good grades.

Probability With Applications to Elementary Statistics — 12 Hours

Mr. Best

Open to boys who have completed three years of Mathematics.

The increasing importance of statistical methods in many fields such as business, law, medicine, and industrial manufacturing, as well as in the biological, physical and social sciences, has caused the College Board Commission on Mathematics to recommend strongly the introduction of this course in the secondary schools. For boys whose own schools do not provide such a course, this will be a unique opportunity.

The course will begin with some topics in advanced algebra such as set theory, permutations and mathematical induction, which enable one to approach probability theory via sample spaces and a random variable. The application of probability theory to simple physical events leads into the study of elementary statistical methods and some consideration of statistical inference.

Topics in Linear Algebra — 12 Hours

MR. MCCLEMENT

Open to those who have had at least three years of mathematics in high school. A course in elementary vector analysis and matrix theory. Material of this kind is of increasing importance for engineers and physicists as well as being of great importance for future mathematicians. It is not usually available and many boys might find this course of great interest and value.

MODERN LANGUAGES

Elementary French — 12 Hours

MR. WHITNEY

Primarily devoted to developing speaking and listening skills. Text: Robin & Bergeaud, Book I.

Intermediate French — 12 Hours

MR. FERRIS

In addition to developing speaking and listening, there will be a considerable amount of reading done. Texts: Robin & Bergeaud, Book I; Department Anthologie.

Advanced French — 12 Hours

INSTRUCTOR TO BE NAMED

Primarily devoted to developing the reading skill plus some writing, mostly dictation and question-answering, not free composition. Texts: Robin & Bergeaud, Book II; Department Anthologie.

All three courses will be conducted exclusively in French, and there will be no translation either from English into French or French into English.

Elementary German — 12 Hours

Mr. Castle

An introduction to the spoken language, this course will be conducted entirely in German. Based on H. Kessler, *Deutsch für Ausländer,* the course will seek to develop listening comprehension and speaking ability through repetition and variation of the basic patterns of German.

Intermediate German — 12 Hours

Instructor to be named

One hour a day will be devoted to developing the students' audio-lingual facilities through drilling the basic patterns of German. Only imported books will be used, mostly by the Max Hueber Verlag in Munich. The second hour each day will be used to increase the students' reading fluency and reading comprehension. One or two modern novels and a modern play will be read.

Elementary Russian — 12 Hours

Mr. Lane

An introduction to speaking, reading, and writing Russian. Inflectional patterns will be explained, and intensive practice in simple conversation will be provided. Recordings and tape recorders are available for aural-oral drill. Text: Fayer, *Basic Russian.*

Elementary Spanish — 12 Hours

Mr. Couch

This course is conducted entirely in Spanish. Through the use of intensive drill in basic patterns speaking and listening skills are fully developed. A text in Spanish aids the students in expressing themselves in writing and in reading comprehension. There are short dictations daily.

Intermediate Spanish — 12 Hours

Instructor to be named

Intermediate Spanish continues the aims of the elementary Spanish course and is conducted in Spanish. Some emphasis is placed on the geography of and current trends in South America and Spain. Every opportunity is given the students to express themselves orally and in writing. There are rèsumès in Spanish — oral and written — based on reading from selected short stories.

MUSIC

Introduction to Music — 12 Hours

Mr. Thornton

The purpose of the course is to help students gain understanding and enjoyment of various forms of music. It presents aspects of the development of musical thought, including examples of folk music and the music of the baroque, romantic, classical, and modern schools, including jazz. The subject matter is illustrated with recordings.

SCIENCE

Structural Chemistry — 12 Hours

Dr. Rees

This course will be given to students who have completed one year of high school chemistry. A brief study of selected papers by Boyle, Lavoisier, and Dalton will give the student an introduction to the beginning of modern chemistry. The main portion of the course will be devoted to the structure of molecules, beginning with the work of Pasteur, van't Hoff, and E. Fischer, and continuing to the renaissance of structural chemistry in recent times. Examples will be given of the importance of molecular geometry to biological systems and to the study of reaction mechanisms. Students will construct models of molecules and will perform laboratory preparations of compounds which have the same formula but different atomic arrangements within their molecules. Although the course contains some historical material, modern principles will be stressed. Knowledge of a foreign language is not a prerequisite, but qualified students will have the opportunity to translate a pertinent article from a French or German journal of chemistry.

Modern Laboratory Physics — 12 Hours

Mr. Hood

This course is for qualified students who have successfully completed one year of physics and wish to strengthen their background as well as to be challenged by new work in the field of mechanics, heat, electricity, light, and modern physics. The course will consist of classroom lectures, demonstrations, and recitations as well as laboratory work. The laboratory equipment of the physics department is available to the students and project work may be done in place of regularly assigned laboratory work in so far as practicable.

Summer Session Students—1961

Adams, Roger C.
Medfield, Mass.
Adams, William M.
New Bedford, Mass.
Adriance, Richard T.
Longmeadow, Mass.
Alexander, Paul E.
Marblehead, Mass.
Allen, Morgan
Westwood, Mass.
Alpers, Byron J.
Peabody, Mass.
Aubry, Alvin J., Jr.
New Orleans, La.
Auld, Frederick H., Jr.
Charleston, W. Va.
Auld, Robert H.
Charleston, W. Va.
Austrian, Mark L.
Fair Lawn, N. J.
Avant, Arnold L.
Norfolk, Va.
Avery, Noyes L., III
Grand Rapids, Mich.
Babson, Marshall B.
Dover, N. H.
Bagby, J. Sumner
Birmingham, Mich.
Bailey, Dexter M.
Evanston, Ill.
Baker, Kent S.
Norwich, Conn.
Banay, Ronald S.
Wellesley, Mass.
Barker, Frederick W.
Syracuse, N. Y.
Barkin, Joel L.
Harrison, N. Y.
Barkin, Roger M.
Great Neck, N. Y.
Beach, John D.
Leonia, N. J.
Belforti, Joseph C.
Framingham, Mass.
Bennink, Robert, Jr.
Boston, Mass.
Benton, Lee F.
Lexington, Ky.
Bernbach, Paul A.
Brooklyn, N. Y.
Berns, Bruce P.
Peabody, Kansas
Bice, David C.
Princeton, Mass.
Biklen, Douglas P.
Westport, Conn.
Bley, Jonathan H.
Winnetka, Ill.
Bluestein, Robert H.
Swampscott, Mass.
Bobrow, Stephen N.
Rye, N. Y.
Boddington, John H.
Colorado Springs, Colo.
Boissiere, Maurice X.
New Orleans, La.
Botein, Michael H.
New York, N. Y.
Bouvier, Joseph R.
Wellesley, Mass.
Bradford, Gerard, III
Andover, Mass.
Brady, John M.
Middletown, R. I.
Brooks, Gilbert A.
Darien, Conn.
Broudy, Arnold S.
Pittsburgh, Pa.
Brown, Douglas W.
Waterville, Maine
Brown, Huntting W.
Bronxville, N. Y.
Brown, Judson B.
Andover, Mass.
Brown, Wallace H.
Shreveport, La.
Buehner, William E.
Andover, Mass.
Burns, William S., Jr.
Lancaster, Pa.
Calderon, Cesar A., Jr.
Santurce, Puerto Rico
Campbell, James H.
Shreveport, La.
Carl, Richard A.
Little Rock, Ar.

Carnahan, James A.
Sante Fe, N. M.
Cecere, Fred A.
Revere, Mass.
Chang, Cecil
Hollis, N. Y.
Cheek, Robert C.
Fort Worth, Texas
Cheng, Frank Yu
Forest Hills, N. Y.
Close, Richard H.
Andover, Mass.
Coates, Philippe A.
Andover, Mass.
Cohen, Howard A.
Great Neck, N. Y.
Cohen, James E.
Derby, Conn.
Cole, William B.
Andover, Mass.
Collenberg, Stewart N., III
Westwego, La.
Cook, Michael F.
Silver Springs, Md.
Cook, Richard P.
Harrisburg, Pa.
Coppage, Samuel F., Jr.
Norfolk, Va.
Couture, John R.
Lawrence, Mass.
Curcuru, Steven N.
Southold, L. I., N. Y.

Dailey, Edward J., III
Plainfield, N. J.
Dashefsky, Barry
Newton Centre, Mass.
Davis, Richard S.
Great Neck, N. Y.
Deis, Frank H.
Hampton, Va.
DeNormandie, Robert L.
Lincoln, Mass.
Dieter, Robert J.
Eustis, Fla.
Douglas, Jeffrey T.
Reading, Mass.
Drysdale, Maurice D.
Randolph, Vt.

Eames, Morgan F.
Holland Patent, N. Y.
Edwards, Bruce H.
Stanford, Calif.
Ehrlich, Louis H., III
Kansas City, Mo.
Everett, Todd H.
Caracas, Venezuela

Farley, David W.
Harvard, Mass.
Feinstein, Robert M.
New Bedford, Mass.
Fenning, William B.
Middletown, N. Y.
Fink, Peter W.
Newton Centre, Mass.
Fleder, John R.
Harrison, N. Y.
Fleming, Charlie R.
Durham, N. C.
Flint, Foster J., Jr.
Bridgeville, Dela.
Fort, John T.
Orange, N. J.
Frankel, Robert S.
W. Hartford, Conn.
Fuller, Michael J.
Watertown, Mass.
Fulton, Frank T., II
Providence, R. I.

Gagliardi, Peter A.
Athol, Mass.
Garnick, Marc B.
No. Andover, Mass.
Gass, David A.
Lynn, Mass.
Gessner, James S.
Lancaster, N. H.
Gonzalez, Jose R.
Bayamon, P. R.
Griswold, A. Whitney, Jr.
New Haven, Conn.
Gunter, Berton H.
Middletown, Conn.

Hagel, Keith
Westport, Conn.
Harding, William H., Jr.
Andover, Mass.
Harrington, Robert T.
Lowell, Mass.
Harsh, Robert A.
Binghamton, N. Y.

Hawley, William H., III
Oxford, Ohio
Hayden, Nolen M.
Austin, Texas
Hellman, Theodore A., Jr.
Short Hills, N. J.
Hetler, Joel H.
Brockport, N. Y.
Hettinger, Sherwood R.
Billings, Mont.
Hill, Jonathan B.
Boston, Mass.
Hinman, Richard G.
Andover, Mass.
Horvitz, Richard A.
Cambridge, Mass.
Hotchkiss, Edwin R.
Seymour, Conn.
Hotelling, James M.
Chapel Hill, N. C.
Hsu, Sam
Jamaica, L. I., N. Y.

Ingham, William P.
Seattle, Wash.

Jacknow, Charles P.
Elizabeth, N. J.
Jackson, Christopher
Hanover, N. H.
Jackson, Thomas W.
Chevy Chase, Md.
Jacobs, Allan J.
Whitestone, N. Y.
Jacobs, Kelly G.
Richmond, Va.
Jonas, Jeffrey W.
Forest Hills, N. Y.
Julian, A. Jonathan
Winston-Salem, N. C.

Kaplan, James M.
Hewlett Harbor, N. Y.
Kassels, Gerald I.
Everett, Mass.
Kenna, Lee M., Jr.
Charleston, W. Va.
Kornrich, William S.
West Hartford, Conn.
Krech, Shepard, III
Easton, Md.
Kreilkamp, Bernard L., II
Washington, D. C.
Kroll, Stephen R.
Chevy Chase, Md.
Kvasnak, Robert N.
Andover, Mass.

Labowitz, Paul L.
Great Neck, N. Y.
Ladewig, Kim P.
Charleston, W. Va
Levine, Alan C.
Fall River, Mass.
Lewin, Robert D.
Malden, Mass.
Lindquist, John W.
Ossinning, N. Y.
Lindquist, Michael W.
Ossinning, N. Y.
Lipman, Arthur G.
New Bedford, Mass.
Lipman, Martin A.
New Bedford, Mass.
Litner, Richard J.
Brookline, Mass.
Little, Prescott M., Jr.
Danville, Va.
Lo Verme, John P.
New York, N. Y.
Lubin, Andrew M.
Leominster, Mass.

McAfee, Stuart R.
Irvington/Hudson, N. Y.
McCorkle, Stephen J.
Noank, Conn.
McGoldrick, Stephen D.
Savannah, Ga.
McLean, Edward R., Jr.
Greenville, Del.
McLean, John
Summit, N. J.
McMahan, Andrew K.
Great Falls, Va.
McMillan, Richard A.
Geneseo, N. Y.
Mahoney, Timothy W.
White Plains, N. Y.
Marsh, Robert T., Jr.
Poultney, Vt.
Martin, Samuel P., IV
Gainesville, Fla.
May, Glenn A.
Brooklyn, N. Y.

Mayer, Stephen P.
Cleveland Hts., Ohio
Melamed, Mark A.
Binghamton, N. Y.
Mele, Peter
Barneveld, N. Y.
Micavich, Michael A.
Methuen, Mass.
Midelfort, Christian F.
LaCrosse, Wisconsin
Mills, Jonathan Q.
New Canaan, Conn.
Morningstar, Richard L.
Brookline, Mass.
Mudge, Randall T.
Concord, N. H.
Munroe, James G.
Andover, Mass.
Myers, George K. L.
Shawnee Mission, Kansas
Nachtigall, Robert D.
Jamaica, N. Y.
Naidus, Richard M.
Glen Brook, N. J.
Newman, Marc S.
Lawrence, Mass.
Niewenhous, Siebrand H., III
Shaker Heights, Ohio
Nussbaum, Alan J.
Passaic, N. J.
O'Kane, Kevin C.
Westwood, Mass.
Orchard, Robert J.
Andover, Mass.
Palmer, William L., III
Belmont, Mass.
Parker, George D.
Randolph, Vt.
Parker, Jonathan H.
Egypt, Mass.
Parsons, Jose C.
Pasay City, Philippines
Pechter, Richard S.
Altoona, Pa.
Penney, Robert E., Jr.
Wolfeboro, N. H.
Petro, Stephen, Jr.
Pottstown, Pa.
Phillips, Clarence E.
Norfolk, Va.
Phillips, John MacF.
Pittsburgh, Pa.
Phillips, Nicholas B.
Maracaibo, Venezuela
Plotz, John R.
Brooklyn, N. Y.
Potter, David
Cape Elizabeth, Me.
Preston, Alexander H.
Middletown, N. Y.

Rasmus, Steven A.
Chippewa Falls, Wisc.
Reed, Philip L., III
Westwood, Mass.
Reimherr, Frederick W.
Middleburg, Pa.
Richey, Thomas S.
Durham, N. C.
Robichaud, Robert R.
Andover, Mass.
Romansky, Stephen S.
Washington, D. C.
Rose, Stephen J.
Beechhurst, N. Y.
Rose, Thomas R.
Topeka, Kansas.
Ryder, Thomas S.
Middleboro, Mass.

Savastano, Olindo J.
Lawrence, Mass.
Scardino, Peter T.
Savannah, Ga.
Schwartzkopf, Louis A.
Lincoln, Neb.
Scoblionko, David P.
Allentown, Pa.
Seamans, Richard F.
Concord, Mass.
Severance, Craig J.
Fryeburg, Maine
Shang, Kenneth D.
Burlington, Mass.
Sharp, Richard W., Jr.
Bound Brook, N. J.
Simon, Stuart A.
Middletown, N. Y.
Siver, Richard R.
Manesquan, N. J.
Smith, Jeffrey O.
Rockville, Md.
Smollar, Paul R.
Washington, D. C.
Sostek, Andrew J.
Medford, Mass.
Southerland, John R.
Austin, Texas
Stahle, Henry A., Jr.
Wakefield, Mass.

Stahle, Millard B.
Wakefield, Mass.
Steinmetz, Neil D.
Taunton, Mass.
Stepanek, Joseph F.
New Delhi, India
Sullivan, James D.
Lowell, Mass.
Tanger, Howard P.
Newton Centre, Mass.
Tarpley, Webster G.
Flushing, N. Y.
Teuber, Christopher L.
Dobbs Ferry, N. Y.
Thompson, MacRobert S.
Fort Worth, Texas
Thurman, Blake
Katonah, N. Y.
Tsang, James
Forest Hills, N. Y.
Urban, David J.
Des Moines, Iowa
Veenstra, Lester B.
South Acton, Mass.
Vinick, Charles W.
St. Petersburg, Fla.
Waxberg, Philip M.
New York, N. Y.
Waxler, Robert P.
New Bedford, Mass.
Weaver, Claude L., Jr.
Atlanta, Ga.
Wechsler, Jonathan F.
Rye, N. Y.
Weisel, Richard D.
Milwaukee, Wisc.
Weiss, Scott T.
Norwich, Vt.
Wheeler, John P., III
Fort Monroe, Va.
White, Stephen T.
Andover, Mass.
Wilcox, Thor F.
Cambridge, Mass.
Willis, Mark A.
Portland, Maine
Wood, Robert W.
Binghamton, N. Y.
Woodson, Walter B., III
Newport, R. I.
Zimmerman, Barry
Portland, Maine

The Commons

Phillips
Academy
Andover
Est. 1778
INFORMATION

The 1962 Summer Session Faculty

John Mason Kemper, A.M., L.H.D., Litt.D.	*Headmaster*
Robert Penniman Hulburd, A.M.	*Director*
Harold Holmes Owen, Jr., A.M.	*Assistant Director*
Frederick Scouller Allis, Jr., A.M.	*History*
John William Ambrose, Jr., A.M.	*Classics*
Eric Crull Baade, Ph.D.	*Classics*
Cornelius Gordon Schuyler Banta, S.B.	*Mathematics*
Emory Shelby Basford, A.B.	*English*
George William Best, B.S.	*Mathematics*
David Langstaff Castle, A.B.	*German*
William Biggs Clift, Jr., B.S.M.	*Athletic Director*
Donald Miller Clark, M.D.	*Medical Director*
Allan Thompson Cook, A.B.	*English*
James Harold Couch, A.M.	*Spanish*
Sherman Frederick Drake, Ed.M.	*Mathematics*
Gerald Denton Ferris, A.M.	*French*
Norman Edward Frankel, B.S.	*Mathematics*
Wilfred Freeman	*English*
Allan George Gillingham, Ph.D.	*Classics*
Charles Gregory Hood, B.S.	*Physics*
Guy D'Oyly Hughes, A.M.	*English*
Carl Edward Krumpe, Jr., A.M.	*Classics*
Robert Edward Lane, A.M.	*Russian*
Stephen Fuller Larrabee, A.B.	*History*
John Richard Lux, M.S.Ed.	*Mathematics*
Warren MacIsaac, A.M.	*English*
Dalton Hunter McBee, A.B.	*Developmental Reading*
Francis Bertrand McCarthy, A.B.	*Art of Communication*
John Claiborne McClement, Ed.M.	*Mathematics*
Gordon Anthony Marlow, A.B.	*English*
Thomas Michael Mikula, A.M.	*Mathematics*
Clement Morell, A.M.	*Mathematics*
Thomas Rees, Ph.D.	*Chemistry*
Thomas Joseph Regan, A.M.	*English*
Albert Karl Roehrig, Ed.M.	*English*
Gerald Shertzer, M.F.A.	*Art*
Morgan Kinmonth Smith, Jr., A.B.	*Mathematics*
Stephen Stanley Sorota, S.B.	*Athletics*
Frank DeWitt Thornton, B.M.Ed.	*Music*
Stephen Whitney, A.M.	*French*